



Launch Mission Execution Forecast

Mission: Falcon 9 Starlink-L22

Issued: 21 Mar 2021 / 0900L (1300Z)

Valid: 24 Mar 2021 / 0428 – 0529L (0828 – 0929Z)



Forecast Discussion: Surface cold front that moved through the area this morning will continue to move off to the east over the next few days. As this happens, high pressure is forecast to rebuild across the central and southern portion of the Florida peninsula. This will bring onshore winds back into the area and will start to increase low level moisture across the Space Coast region. Winds are not expected to be particularly strong on the primary launch day as southeast winds are only expected to be in the 5 to 10 mph range. The primary concern for launch day is the Cumulus Cloud Rule.

In the event of a 24-hour delay, winds begin to increase as the surface pressure gradient begins to increase over the Space Coast. Continued onshore low level winds will also increase moisture and cloud cover as well. Southeast winds are expected to be in the 12 to 17 mph range with isolated gusts to perhaps 20 mph possible. The primary concern will be Liftoff Winds as well as the Cumulus Cloud Rule.

Launch Day	Probability of Violating Weather Constraints							
	10%	Primary Concerns: Cumulus Cloud Rule						
	Weather Conditions					Additional Risk Criteria		
	Weather/Visibility:	None / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Temp/Humidity:	67°F / 87%	Cumulus	Scattered	3,000	4,500	Booster Recovery Weather:	Low
	Liftoff Winds (200’):	130° 5 - 10 mph				Solar Activity:	Low	
24-Hour Delay	Probability of Violating Weather Constraints							
	10%	Primary Concerns: Liftoff Winds, Cumulus Cloud Rule						
	Weather Conditions					Additional Risk Criteria		
	Weather/Visibility:	None / 7 mi.	Type	Coverage	Base (ft)	Tops (ft)	Upper-Level Wind Shear:	Low
	Temp/Humidity:	69°F / 90%	Cumulus	Scattered	2,500	4,500	Booster Recovery Weather:	Low
	Liftoff Winds (200’):	150° 12 - 17 mph				Solar Activity:	Low	
Note: The Probability of Violation (POV) is the chance that a Lightning Launch Commit Criteria (LLCC) or certain user constraints (surface winds, precipitation, and temperatures, etc.) will be violated during the launch window. It does not take into account upper-level wind shear, booster recovery weather, and solar activity.								
Next Forecast Will Be Issued		22 Mar 2021						